

## REMARKS

### §112 Rejection

Each of claims 22-24, 26 and 31 have been amended in the manner suggested by the Examiner to obviate the various §112 indefiniteness rejections. The careful review of the claims by the Examiner is acknowledged with appreciation.

### Claims 22-31 are Allowable

The indication that claims 23, 24 and 26-31 would be allowable if rewritten to obviate the indefiniteness rejections and to include all of the limitations of the base claim and any intervening claims is acknowledged with appreciation.

Each of claims 23, 24, 26 has been rewritten in independent form to include all the limitations of original claim 21 and any intervening claim.

Amended claim 22 is dependent on claim 23, claim 25 is dependent on claim 24, and claims 27-31 are ultimately dependent on claim 26.

Accordingly, each of claims 26-31 is believed now to be in a proper form for allowance and to define patentable subject matter for at least the reasons for which they were previously deemed to be allowable.

Accordingly, reconsideration and allowance of claims 23-31 is requested.

### **Claim 32**

New claim 32 is dependent on independent claim 24 and has been added to provide claims affording a greater range of patent protection. New claim 32 defines patentable subject matter for at least the reasons for which claim 24 was deemed to do so and hence is believed to be allowable.

### **Drawings**

The proposed drawing corrections filed on August 19, 2002 were approved and a new set of drawings is enclosed to be substituted for the copies now on file.

### **Conclusion**

As amended, all of the remaining claims 22-32 are believed to comply with the definiteness and clarity requirements of §112 and to define patentable subject matter under §103 for at least the reasons for which claim 23, 24 and 26-31 were deemed to be allowable if rewritten in independent form. Accordingly, reconsideration and allowance of claims 22-32 is requested.


If, after considering this Response, the Examiner is of the view that any of the claims are not in a condition for allowance, a telephone interview is requested with applicant's undersigned attorney, William Francis. The Examiner is asked to initiate this interview by telephoning William Francis at 248-689-3500 who normally can be reached Monday through Friday between 9:00 A.M. and 5:00 P.M.

Respectfully submitted,

Reising, Ethington, Barnes, Kisselle,  
Learman & McCulloch, P.C.

WHF:sal

By



Attorneys for Applicant

William H. Francis #25,335

Telephone (248) 689-3500

Facsimile (248) 689-4071



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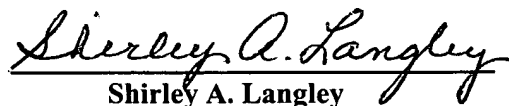
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel A. Gilmour  
Serial No. 09/765,252  
Filed: January 18, 2002  
For: Automotive Fuel Tank Electrical Fitting  
Group Art Unit: 2831  
Examiner: Jinhee J. Lee  
In reply to: Examiner's Letter of October 2, 2002

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CERTIFICATE OF MAILING

Date of Deposit with U.S. Postal Service November 26, 2002. I hereby certify that this paper is being deposited with the United States Postal Service as first class mail under 37 CFR 1.8 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

  
Shirley A. Langley

Box AF  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

**MARKED-UP COPY SHOWING CHANGES MADE IN  
FIRST RESPONSE TO FINAL OFFICE ACTION**

This is a First Response to the Final Office Action of October 2, 2002 which indicated claims 23, 24 and 26-31 would be allowable if rewritten to overcome various indefiniteness rejections under §112 and rejected the remaining claims under §103 in view

of a combination of applied references. This First Response is being filed within two months of the Final Office Action so that any extension fees will be calculated from the mailing date of any Advisory Action.

Please amend this application as follows:

**IN THE CLAIMS**

**Please Cancel claim 21 without prejudice.**

**Please AMEND claims 22, 23, 24, 26 and 31 as follows:**

**22. (First Amended)**

1           The electrical fitting of claim [21] 23 wherein the circumferential edge of the  
2       opening[(s)] has an axial length at least equal to the diameter of the pin and the glass seal[(s)]  
3       has an axial length at least equal to the diameter of the pin.

**23. (First Amended)**

1           [The electrical fitting of claim 21 wherein]  
2           **A sealed electrical fitting for a vehicle fuel tank comprising:**  
3           **a metal wall of the fuel tank having at least one opening through the wall**  
4           **with a circumferentially continuous edge;**  
5           **at least two elongate electrically conductive metal pins extending through**  
6           **the at least one opening and each of the pins having a diameter and a longitudinal**  
7           **length greater than the diameter;**  
8           **at least one seal of glass received in the at least one opening and bonded**

9 to at least one of the pins;

10 adjacent surfaces of adjacent pins being spaced apart a distance equal  
11 to or greater than the diameter of the pin, the minimum spacing between a peripheral  
12 edge of the glass seal and each immediately adjacent pin being at least equal to the  
13 diameter of the pin, the coefficient of thermal expansion of the metal wall being greater  
14 than the coefficient of thermal expansion of the glass of the glass seal, the metal wall  
15 and the glass seal being configured so that the glass is in a compressed state, and

16 the same glass seal is bonded to at least two of the pins and the edge of the  
17 same opening through the metal wall.

#### 24. (First Amended)

1 [The electrical fitting of claim 21 wherein the wall of the fuel tank comprises]

2 A sealed electrical fitting for a vehicle fuel tank comprising:

3 a metal wall of the fuel tank having a metal flange, a metal tubular housing  
4 fixed to the flange, extending through the flange, and defining [the] an opening through the  
5 wall[,];

6 at least two elongate electrically conductive metal pins extending through  
7 the opening and each of the pins having a diameter and a longitudinal length greater  
8 than the diameter;

9 a seal of glass received in the opening and bonded to the pins;

10 adjacent surfaces of adjacent pins being spaced apart a distance equal  
11 to or greater than the diameter of the pin, the minimum spacing between a peripheral

edge of the glass seal and each immediately adjacent pin being at least equal to the  
diameter of the pin, the coefficient of thermal expansion of the metal wall being greater  
than the coefficient of thermal expansion of the glass of the glass seal, the metal wall  
and the glass seal being configured so that the glass is in a compressed state; and

all of the pins are received in the housing and the glass seal is bonded to all  
of the pins and the housing.

**26. (First Amended)**

[The electrical fitting of claim 21 wherein the metal wall comprises]

**A sealed electrical fitting for a vehicle fuel tank comprising:**

**a metal wall of the fuel tank having** a metal flange, at least two metal collars  
carried by the flange and each defining [one of the through openings] **a through opening**  
having an inner circumferentially continuous edge;

**an electrically conductive metal pin extending through each of the**  
**openings and each of the pins having a diameter and a longitudinal length greater than**  
**the diameter;**

**a seal of glass received in each of the openings and bonded to the**  
**associated pin received therein,** [each collar has one of the pins extending therethrough and  
one of the glass seals is bonded to each of the pins] and the inner edge of the collar in which  
the pin is received; **and**

13                    adjacent surfaces of adjacent pins being spaced apart a distance equal  
14                    to or greater than the diameter of the pin, the minimum spacing between a peripheral  
15                    edge of the glass seal and each immediately adjacent pin being at least equal to the  
16                    diameter of the pin, the coefficient of thermal expansion of the metal wall being greater  
17                    than the coefficient of thermal expansion of the glass of the glass seal, and the metal  
18                    wall and the glass seal being configured so that the glass of each seal is in a compressed  
19                    state.

31. (First Amended)

1                    The electrical fitting of claim 26 wherein the [walls] wall also comprises a  
2                    metal tray having a circumferentially continuous outer peripheral edge, the collars are  
3                    homogeneously integral with the tray, the flange has another through opening defined by a  
4                    circumferentially continuous edge which bears on the outer peripheral edge of the tray and  
5                    these mating edges are fixed and sealed together by one of welding, soldering and brazing.

B



Please ADD the following claim 32:

**32. (Added)**

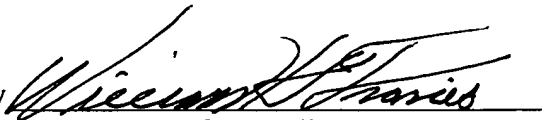
1           The electrical fitting of claim 24 wherein the circumferential edge of the  
2           opening has an axial length at least equal to the diameter of the pin and the glass seal has an  
3           axial length at least equal to the diameter of the pin.

Respectfully submitted,

Reising, Ethington, Barnes, Kisselle,  
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WHF:sal

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Attorneys for Applicant

William H. Francis #25,335

Telephone (248) 689-3500

Facsimile (248) 689-4071